REMARKS

The undersigned appreciates the telephone interview granted by Examiner Srivastava on 7 September 2001 with Agent Black and Attorney of record Parsons. The Examiner's suggestions at the interview are noted with appreciation and have been taken into account in the present response.

Claims 1, 2, 3, 6, 8, 9, and 11 have been cancelled.

Claims 4, 5, 7, 10, 12–31 are pending in this application.

Regarding Claims 4, 5, 10, 12, 31 and 21, 22, 23, 24, 26

The indication that Claims 4, 5, 10, 12, 31 are allowed has been noted with appreciation. The indication that Claims 21, 22, 23, 24, 26 are allowable if rewritten has been noted with appreciation. Claims 21, 22 and 26 have been rewritten in independent form and allowance of Claims 21(amended), 22(amended) and 26(amended) is requested.

Claims 23 and 24 depend upon Claim 22 (amended) and therefore should be allowed for at least the same reasons as Claim 22 (amended); allowance of Claims 23 and 24 is requested.

Regarding Claims 7 (Amended), 20, 29 and 30

Claims 7(Amended), 20, 29 and 30 stand rejected under 35 USC 103(a) as being unpatentable over U.S. Patent 4,766,495 of Kobayashi et al. in view of U.S. Patent 5,381,238 of Namiki et al.

LAW OFFICES OF
SKJERVEN MORRILL
MacPHERSON LLP
3 EMBARCADERO CENTER
28th FLOOR
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

These claims were discussed at the examiner interview of 7 September 2001, wherein it was pointed out that a phase shift of 2π (i.e. 360 degrees) is significantly different from, and not an obvious variant of the phase shift of π (i.e. 180 degrees) as found in the prior art.

Claim 7 (Amended) has been rewritten in independent form since the parent claim has been cancelled. Also the first occurrence of the term "the output" has been changed to "an output" since there was previously no antecedent basis for "the output" in the relevant claims. It is respectfully submitted that this change does not constitute new matter nor is a new search necessary and consideration of Claim 7 (Amended) is requested.

Claim 20 (Amended) has been rewritten in independent form since the parent claim has been rejected in the office action. It is respectfully submitted that this change does not constitute new matter nor is a new search necessary and consideration of Claim 20 (amended) is requested.

In regards to Claims 7, 20, 29, 30, the office action states "Namiki teaches by shifting the phase 180 deg (2π) color distortion in a displayed television signal can be prevented." It is respectfully submitted that Namiki discloses shifting the phase by 180 deg but does not disclose nor teach or suggest shifting the phase by 2π (i.e. 360 degrees) and that these are distinct in the art. The use of π in regard to phase angles is generally understood, in the art, to refer to radian measure. For example, Figure 15 of Namiki clearly shows shifting phase by any of 0, 90, 180 or 270 degrees but not 360 degrees (2π radians). Moreover, Claim 7 (Amended) explicitly recites "an integer multiple of 2π shift". Claim 20 (Amended) explicitly recites "the correction signal is an integer multiple of 2π shift". Claim 29 explicitly recites "the filtered hue information signal including unfiltered offsets of plus or minus 2π". It is respectfully submitted, therefore, that Kobayashi and Namiki in combination do not teach,

LAW OFFICES OF
SKJERVEN MORRILL
MACPHERSON LLP
3 EMBARCADERO CENTER
28th FLOOR
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

disclose or suggest all the limitations of Claim 7 (Amended), Claim 20 (Amended) or Claim 29 and that these claims are allowable under 35 USC 103(a). Moreover Claim 30 depends upon Claim 29 and therefore Claim 30 is allowable for at least the same reasons as Claim 29. Allowance of Claims 7 (Amended), 20 (Amended), 29 and 30 is requested.

<u>Regarding Claims 18(Amended), 19, 25, 27 and 28 (Twice amended)</u>

Claims 18(Amended), 19, 25, 27 and 28 (Twice amended) stand rejected under 35 USC 102(b) as being anticipated by U.S. Patent 4,766,495 of Kobayashi et al.

These claims were discussed at the examiner interview of 7 September 2001, wherein it was pointed out that, in these claims, a "constraining of a phase signal to a present range" (or "to constrain a phase signal within a present range") is an important limitation of claims 18, 19, 25, 27 and 28 (amended), and that such constraining is not found in Kobayashi et al. A preferred embodiment disclosed in the application shows a non-trivial preset range of 4π (i.e. 720 degrees), see Figure 7. It is submitted that "finite" is inherently implied in the claim limitation "preset range", and that ranges which have either a zero or unbounded span are not ranges at all. However, in accordance with the Examiner's suggestion, the language of claims 18 and 28 has been amended to further clarify that the language implies a finite preset range. Thus, the language of claims 18 and 28 has been amended from "preset range" to "finite preset range".

Claims 19, 25 and 27 each depend on Claim 18 (Amended).

The rejections of Claims 18(Amended), 19, 25, 27 and 28 (Twice amended) are respectfully traversed.

LAW OFFICES OF
SKJERVEN MORRILL
MACPHERSON LLP
3 EMBARCADERO CENTER
28th FLOOR
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

In regards to Claims 18(Amended) and 28 (Twice amended), the office action states "Kobayashi inherently discloses constraining a phase signal within a preset range (in order to correct the phase, the output phase must be inherently constrained within a preset range)." This statement is respectfully traversed, the Examiner has not shown such an inherent disclosure. Kobayashi does not disclose or teach the constraining of phase angles as the term is understood in the relevant arts or in non-specialized language usage. For example, Figure 7 of the drawings in the present application, a suitable example preset range of 4π (720 degrees from $-\pi$ to $+3\pi$) is shown. It is respectfully submitted, therefore, that Kobayashi does not teach, disclose or suggest all the limitations of Claims 18 (Amended) or 28 (Twice amended), and that these claims are allowable under 35 USC 102(b). Moreover, Claims 19, 25 and 27 each depend upon Claim 18(Amended) and are therefore allowable for at least the same reasons as Claim 18(Amended). Allowance of Claims 18 (Amended), 19, 25, 27 and 28 (Twice amended) is requested.

<u>Regarding Claims 13 (Twice amended), 14, 15, 16, and 17</u>

Claims 13 (Twice amended), 14, 15, 16, and 17 stand rejected under 35 USC 102(b) as being anticipated by U.S. Patent 4,766,495 of Kobayashi et al.

These claims were discussed at the examiner interview of 7 September 2001, wherein it was pointed out that, in these claims, the limitations "adjustment signal provides an unfiltered offset that is added at the output" and "adding the adjustment signal to the input signal" imply addition or level shifting of the signal both before and after filtering. Conversely Kobayashi et al. discloses only a single addition function.

A difference can be clearly in that Kobayashi (see Kobayashi Fig. 5) discloses:

LAW OFFICES OF
SKJERVEN MORRILL
MacPHERSON LLP
3 EMBARCADERO CENTER
28th FLOOR
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

Scaling (multiplying) the input by a coefficient, filtering the input signal, scaling (multiplying) the filter output by a second coefficient and adding the scaled input to the scaled output.

whereas the claim 13 (Amended) claims:

"adding the adjustment signal to the input signal", "filters the input signal" and "adjustment signal provides an offset that is added at the output"

and these are not equivalent.

In accordance with the Examiner's suggestion, the language of claim 13 has been amended to further clarify that the language implies an addition or the functional equivalent thereof (as opposed to the scaling or multiplication found in Kobayashi). Thus, the language of claim 13 has been amended from "provides an unfiltered offset to the output" to "provides an unfiltered offset <u>that is added at</u> the output".

Claims 14, 15, 16, and 17 each depend on Claim 13 (Twice amended).

The rejections of Claims 13 (Twice amended), 14, 15, 16, and 17 are respectfully traversed.

In regards to Claim 13 (Twice amended), the office action states "Kobayashi discloses the claimed providing a circuit, inputting an input signal into the circuit such that the circuit filters the input signal to provide a filtered component to the output of the circuit (fig 5 items 21 and 22), inputting an adjustment signal into the circuit so that the adjustment signal provides an unfiltered offset to the output (fig 5 adjustments coefficients K2 and K1 will change the level of output Dvec), adding the adjustment signal to the input signal (figure 5,

LAW OFFICES OF
SKJERVEN MORRILL
MACPHERSON LLP
3 EMBARCADERO CENTER
28th FLOOR
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

the signal K2 x Do(N+1) is added to the delayed or filtered signal K1 x DoN)". This statement is respectfully traversed. Claim 13 (Twice amended) recites in part a first limitation "inputting an adjustment signal so that the adjustment signal provides an unfiltered offset that is added at the output" and a second limitation "adding the adjustment signal to the input signal". This clearly recites two offsets or additions to the signal, the first limitation relating to the output signal from the filter and the second limitation relating to the input signal to the filter. Conversely, in Fig. 5 Kobayashi discloses scaling (multiplying) both delayed an undelayed signal and adding the two which could, at most, be considered to anticipate one of the two limitations cited – but not both limitations. Scaling a signal and offsetting a signal are crucially different – scaling a zero signal will have no effect on it, but offsetting a zero signal makes it non-zero. Moreover, claims 14, 15, 16, 17 each depend from claim 13 (Twice amended) and therefore should be allowed for at least the same reasons as claim 13 (Twice amended).

For the foregoing reasons, it is respectfully submitted that all pending claims are now in condition for allowance. Should the Examiner wish to discuss any aspect of this case via telephone, please contact the undersigned at (415) 217-6000.

EXPRESS MAIL LABEL NO:

EL 873 075 430 US

Respectfully submitted,

N R H Black

N. R. H. Black
Agent
Reg. No. 43,320

LAW OFFICES OF
SKJERVEN MORRILL
MACPHERSON LLP
3 EMBARCADERO CENTER
28th FLOOR
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

Attachment A

4. (Amended) A circuit comprising:

a first circuit portion connected to a first input, the first circuit portion including at least one delay element; and

a second circuit portion attached to the first circuit portion, the second circuit portion including at least one delayed signal input from the at least one delay element, and an adjustment input, the adjustment input not passing through the at least one delay element, wherein when there is no adjustment input, the circuit acts as a filter, and wherein the adjustment input changes the level of the output without the adjustment signal being filtered,

wherein the second circuit includes at least one coefficient circuit connected to one of the at least one delayed signal inputs and to the adjustment input,

and wherein the output of the at least one coefficient circuits is to a delay and the output of delay sent to the at least one coefficient circuits.

5. (Amended) A circuit comprising:

a first circuit portion connected to a first input, the first circuit portion including at least one delay element; and

a second circuit portion attached to the first circuit portion, the second circuit portion including at least one delayed signal input from the at least one delay element, and an adjustment input, the adjustment input not passing through the at least one delay element, wherein when there is no adjustment input, the circuit acts as a filter, and wherein the adjustment input changes the level of the output without the adjustment signal being filtered,

LAW OFFICES OF
SKJERVEN MORRILL
MacPHERSON LLP
3 EMBARCADERO CENTER
28th FLOOR
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

wherein the second circuit includes at least one coefficient circuit connected to one of the at least one delayed signal inputs and to the adjustment input,

and wherein the coefficient circuit includes an input summer and a coefficient multiplier.

7. (Amended) A [The] circuit [of claim 1] <u>comprising:</u>

<u>a first circuit portion connected to a first input, the first circuit portion including at least one delay element; and</u>

<u>a second circuit portion attached to the first circuit portion, the second circuit portion including at least one delayed signal input from the at least one delay element, and an adjustment input, the adjustment input not passing through the at least one delay element, wherein when there is no adjustment input, the circuit acts as a filter, and wherein the adjustment input changes the level of an output without the adjustment signal being filtered,</u>

wherein the first input and output are phase representations and wherein the adjustment input causes an integer multiple of 2π shift in the output signal.

10. (Amended) A circuit comprising:

a first circuit portion connected to a first input, the first circuit portion including at least one delay element; and

a second circuit portion attached to the first circuit portion, the second circuit portion including at least one delayed signal input from the at least one delay element, and an adjustment input, the adjustment input not passing through the at least one delay element, wherein when there is no adjustment input, the circuit acts as a filter, and wherein the adjustment input changes the level of the output without the

LAW OFFICES OF
SKJERVEN MORRILL
MACPHERSON LLP
3 EMBARCADERO CENTER
28th FLOOR
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

adjustment signal being filtered, further comprising adjustment control logic adapted to provide the adjustment input wherein the adjustment control logic is adapted to produce a minus 2π adjustment signal if a tested signal is greater than a positive reference value and produce a positive 2π adjustment signal if the tested signal is less than a negative reference value.

12. A circuit comprising:

a digital filter including input lines giving signal values at different time indexes, coefficient multiplier circuitry adapted to multiply the signal values by filter coefficients, and a summer connected to the coefficient multiplier circuitry to produce an output value; and

summing circuitry connected to the input lines of the signal values at different time indexes and to an adjustment input, wherein the output of the summing circuitry being sent to the coefficient multiplying circuitry.

13. (Twice Amended) A method comprising:

providing a circuit;

inputting an input signal into the circuit such that the circuit filters the input signal to provide a filtered component to the output of the circuit;

inputting an adjustment signal into the circuit so that the adjustment signal provides an unfiltered offset <u>that is added at</u> [to] the output; and

adding the adjustment signal to the input signal.

LAW OFFICES OF
SKJERVEN MORRILL
MACPHERSON LLP
3 EMBARCADERO CENTER
28th FLOOR
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

14. The method of claim 13, wherein the adjustment signal keeps the output within a preset range.

15. The method of claim 13, wherein the filtering of the input signal is a low-pass filtering.

16. The method of claim 13, wherein the input is a phase signal.

17. The method of claim 13, wherein the input is a hue signal.

18. (Amended) A method comprising:

constraining a phase signal within a <u>finite</u> preset range, the constraining step including adding a correction signal to the phase signal; and

filtering the phase signal without filtering the correction signal portion of the phase signal.

19. The method of claim 18, wherein the filtering of the modified phase signal is a low-pass filtering.

20. (Amended) <u>A</u> [The] <u>method</u> [of claim 18] <u>comprising:</u>

<u>constraining a phase signal within a preset range, the constraining step including adding a correction signal to the phase signal; and</u>

<u>filtering the phase signal without filtering the correction signal portion of the phase signal</u>

wherein the correction signal is an integer multiple of 2π.

21. (Amended) <u>A</u> [The] <u>method</u> [of claim 18] <u>comprising:</u>

LAW OFFICES OF
SKJERVEN MORRILL
MACPHERSON LLP
3 EMBARCADERO CENTER
28th FLOOR
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

constraining a phase signal within a preset range, the constraining step including adding a correction signal to the phase signal; and

filtering the phase signal without filtering the correction signal portion of the phase signal

wherein the preset range is zero to 2π.

22. (Amended) (Amended) A [The] method [of claim 18] comprising:

constraining a phase signal within a preset range, the constraining step including adding a correction signal to the phase signal; and

filtering the phase signal without filtering the correction signal portion of the phase signal

wherein the preset range is zero to 2π plus a guard band.

23. The method of claim 22, wherein the guard band is a reference value above or below the range zero to 2π.

24. The method of claim 23, wherein the guard bands are -π to zero and 2π to 3π.

25. The method of claim 18, wherein the constraining step is such that the phase signal is processed so as to use a differential input.

26. (Amended) A [The] method [of claim 25] comprising:

constraining a phase signal within a preset range, the constraining step including adding a correction signal to the phase signal; and

LAW OFFICES OF
SKJERVEN MORRILL
MacPHERSON LLP
3 EMBARCADERO CENTER
28th FLOOR
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

filtering the phase signal without filtering the correction signal portion of the phase signal

wherein the constraining step is such that the phase signal is processed so as to use a differential input and wherein the differential input is offset by an integer multiple of 2π so as to reduce the absolute value of the differential input.

27. *The method of claim 18, wherein the phase signal is a hue signal.*

28. (Twice Amended) An apparatus comprising:

circuitry to constrain a phase signal within a finite preset range using a correction signal; and

a filter adapted to filter the phase signal without filtering the correction signal contribution, and to add the correction signal to the phase signal.

29. *A method of processing data for video comprising:*

providing picture data including hue information encoded as a phase having a first range;

producing a filtered hue information signal, the filtered hue information signal including unfiltered offsets of plus or minus 2π.

30. The method of claim 29, wherein producing a filtered hue information signal including adding the unfiltered offsets to the hue information signal.

31. An electronic circuit comprising:

a delay which receives an input signal and outputs a delayed input signal;

LAW OFFICES OF
SKJERVEN MORRILL
MacPHERSON LLP
3 EMBARCADERO CENTER
28th FLOOR
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646

a first adder which outputs a first corrected signal by adding a correction signal to the input signal;

a second adder which outputs a second corrected signal by adding the correction signal to the delayed input signal; and

a third adder which outputs an output signal by adding the first corrected signal and the second corrected signal.

LAW OFFICES OF
SKJERVEN MORRILL
MacPHERSON LLP
3 EMBARCADERO CENTER
28th FLOOR
SAN FRANCISCO, CA 94111
(415) 217-6000
FAX (415) 434-0646